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Proposal: An ICSU Study of Means for Strengthening The Effectiveness of Biological Weapons Prohibitions

Background on Biological Weapons Prohibitions:

Although all the major nations have signed the Biological Weapons Convention (BWC) of 1972 and the Geneva Protocol of 1925, which prohibit the development, production, stockpiling and use of biological weapons, there has been considerable erosion of confidence in compliance with these prohibitions in recent years. The advent of genetic engineering and other new biotechnologies, with their potential for the construction of novel and unpredictable biological and chemical warfare agents, has been an important factor in arousing suspicions.

The BWC permits the development and possession, in appropriate quantities, of biological agents and toxins for "prophylactic, protective, or other peaceful purposes," including defensive purposes. However, it is generally agreed by knowledgeable scientists that research for the development of new offensive biological agents and research to assess potential threats and develop defenses against them are in large part indistinguishable. Thus, the military interest in biotechnology evident on both sides has given rise to fears that the grey area of overlap between offensive and defensive research may serve as a cover for the development and testing of enhanced warfare agents or new pathogens.

These fears could lead to the proliferation of efforts to obtain a biological warfare capability - a means of mass destruction far more accessible, both technically and financially, than nuclear weapons. The consequent danger of accidental or intentional release or procurement by terrorists would be a global threat.

The Geneva Protocol and the BWC do not explicitly restrict research and they lack meaningful provisions for reportage, verification or complaint resolution with respect to biological weapons. As a result, suspicions and unconfirmed allegations have proliferated. The Second Review Conference of the Biological Weapons Convention, held in September, 1986, confronted these problems and took unprecedented action in agreeing on an exchange of information as a confidence-building measure. Information on high-containment facilities of the types used for biological defense activities and on unusual disease outbreaks will be exchanged annually, beginning in October, 1987. The signatories also encouraged open publication of defense data, and they agreed (for the first time) that the Secretary-General of the United Nations could be called upon to investigate any suspicious event. The effectiveness of these measures will be evaluated at the next review conference, which must be held no later than 1991. That conference is mandated to consider more extensive measures, possibly in the form of a new protocol or legal addendum to the Convention.

Nations such as Sweden and Australia that are leaders in guiding the development of the BWC are sure to regard an ICSU report as a major resource in determining the actions to be taken at the next review conference and beyond. To illustrate the general recognition of the need for scientific input: the Italian Ambassador said at the Second Review Conference that "Italy especially believes in the constructive role that scientists can play, in view of achieving a greater degree of transparency in the field of biotechnology." The FRG called for "a set of generally-accepted rules of conduct with respect to biological organisms and substances coming under the BWC," and Denmark noted the need for "a set of model procedures for facilities conducting biological defense work." Bulgaria urged nations to volunteer evidence "that they do not conduct research with a view to creating and perfecting biological and toxin weapons."

There are no more than three years, perhaps less, in which to carry out a study and draw up proposals in advance of the next review conference. The project needs to start right away. It is discrete, limited in time, requires scientific expertise and deals with means of avoiding an environmental threat; as such it would make an appropriate project for SCOPE.

The study would have to identify and investigate the critical stages of defensive biological research and development that give rise to suspicions of offensive preparations, particularly with regard to the possible development and testing of novel, genetically-engineered agents. Ways need to be found to demonstrate that these critical activities are either carried out openly or not at all. Satellite surveillance, regular international inspection, challenge inspection, annual reportage and/or other means of verification may be required in specified areas in order to provide reassurance that the objectives of the treaty are not being circumvented. More extensive information exchange, including some of the proposals considered but not adopted at the Second Review Conference, may be desireable. Certain specified scientific activities might be ruled out as too provocative or potentially destructive; where verification is impossible, nations might voluntarily pledge not to engage in them. Guidelines for the conduct of acceptable defensive scientific activities might be drawn up.

The study might also consider ways of including biochemical weapons - biologically-produced chemicals other than toxins, with weapons potential - under the restrictions imposed on toxins. Although, as chemicals, these will come under the chemical weapons convention now under negotiation, the latter is concerned primarily with gases and will not provide adequate controls on the biochemicals that, as the result of recent advances in biotechnology, are attracting military interest.

Following a study of questions such as these by knowledgeable scientists from different parts of the world, a uniquely influential report could be issued listing critical measures that would provide maximal reassurance against the use of science in ways that would undermine the spirit of the Biological Weapons Convention.

Barbara Hatch Rosenberg, Ph.D.
Sloan-Kettering Institute
Walker Laboratory
Rye, New York 10580